



Why Chelating Agents Are Essential

Chelating agents are crucial components in many formulations across personal care, home care, industrial, and agricultural applications. Their primary role is to bind and deactivate metal ions—such as calcium, magnesium, iron, and copper—that can otherwise destabilize products, reduce efficacy, promote oxidation, or cause discoloration. Without chelating agents, formulations may suffer from reduced shelf life, loss of performance, and undesirable visual or sensory changes.

Problems Solved by Chelating Agents

In personal care products, chelates prevent oxidative degradation, enhance preservative performance, and stabilize active ingredients. In cleaning products like laundry and dishwashing detergents, they soften water and enhance detergent efficiency. In agriculture, chelating agents improve micronutrient availability to plants, and in water treatment, they prevent scale and corrosion by binding metal ions.

Chelating Agents and Their Characteristics

	EDTA	GLDA	MGDA	DTPA
Full Name	Ethylenediaminetetraacetic Acid	Glutamic Acid Diacetic Acid	Methylglycine Diacetic Acid	Diethylenetriaminepentaacetic Acid
Origin	Petrochemical	Biobased (glutamic acid)	Partially biobased (sarcosine)	Petrochemical
Biodegradability	Poor (<20%)	Readily biodegradable	Readily biodegradable	Poor
Environmental Impact	Persistent in environment	Low toxicity, ecofriendly	Better than EDTA, less persistent	Persistent in soil and water
Chelating Strength	Very high (especially Fe^{3+} , Ca^{2+})	Moderate	High (similar to EDTA)	Highest (esp. Fe^{3+} , Cu^{2+} , heavy metals)
pH Range	3–10	3–14	3–10	2–10
Toxicity	Low to moderate	Very low	low	Low to moderate
Cost	Low	Medium	Medium	High

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Discover our comprehensive range of chelating agents, including both conventional EDTA and eco-friendly biodegradable options like GLDA and MGDA. Perfectly suited for a variety of applications, our products are designed to enhance the performance of personal care formulations, detergents, and household or industrial cleaning products.

Product	CAS Number	Appearance	Standard Packaging*	Grade	Purity (min)	Chelate value (mgCaCO ₃)
GLDA -4Na liquid	51981-21-6	Slightly Yellow Transparent Liquid	250kg drum, 1250kg IBC tote	47%, 38%	47%, 38%	
MGDA -3Na liquid	164462-16-2	Slightly Yellow Transparent Liquid	250kg drum, 1250kg IBC tote	40%	40%	
MGDA-3Na Solid	164462-16-2	Slightly yellow Powder/ Granules	25kg bag, 1000kg bag	80%	80%	
EDTA -2Na	6381-92-6	White Crystalline Powder	25kg bag	Tech grade	99.00%	256 min
				High grade	99.50%	267 min
EDTA -4Na	13235-36-4	White Crystalline Powder	25kg bag	Tech grade	99.00%	215 min
				High grade	99.50%	220 Min.
EDTA -4Na liquid	64-02-8	Light Yellow Liquid	250kg drum, 1250kg IBC tote	Tech grade	39%	100 min.
				High grade	39%	102 min
EDTA acid	60-00-4	White Crystalline Powder	25kg bag	Standard	99.00%	339 min.
DTPA acid	67-43-6	White Powder	25kg bag		99.00%	

